Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fuel cell having at least a membrane electrode assembly comprising:

an electrolyte membrane;

a hydrogen electrode-side catalyst layer formed on one side thereof; and

an air electrode-side catalyst layer formed on the other side thereof,

wherein a porosity of the hydrogen electrode-side catalyst layer is lower than a porosity of the air electrode-side catalyst layer, a volume of pore space of the hydrogen electrode-side catalyst layer has a range of 1.0% to 3.0% of a total volume of the catalyst layer, and a volume of pore space of the air electrode-side catalyst layer has a range of 3% to 30% of the total volume of the catalyst layer,

wherein the hydrogen electrode-side catalyst layer contains an additive having an average particle diameter less than or equal to 0.3 μm and the porosity of the hydrogen electrode-side catalyst layer is lower than the porosity of the air electrode-side catalyst layer, and

wherein the additive is selected from titanium oxide, zinc oxide, and cerium oxide.

2. (Previously Presented) The fuel cell according to claim 1, wherein the hydrogen electrode-side catalyst layer and the air electrode-side catalyst layer each include ion-exchange resin and carbon carrier and a weight ratio of ion-exchange resin to carbon carrier of the hydrogen electrode-side catalyst layer is larger than a weight ratio of ion-exchange resin to carbon carrier of the air electrode-side catalyst layer, and the porosity of the hydrogen electrode-side catalyst layer is lower than the porosity of the air electrode-side catalyst layer.

3. (Previously Presented) The fuel cell according to claim 2, wherein the weight ratio of ion-exchange resin to carbon carrier of the hydrogen electrode-side catalyst layer is greater than or equal to 1.5:1 and less than 3.0:1 and the weight ratio of ion-exchange resin to carbon carrier of the air electrode-side catalyst layer is greater than or equal to 0.4:1 and less than 1.5:1.

4. (Previously Presented) The fuel cell according to claim 2, wherein the volume of pore space of the hydrogen electrode-side catalyst layer is 2% of the total volume of the catalyst layer and the volume of the pore space of the air electrode-side catalyst layer is 30% of the total volume of the catalyst layer.

5-7. (Canceled)

8. (Previously Presented) The fuel cell according to claim 1, wherein the hydrogen electrode-side catalyst layer is formed by spraying a catalyst ink and the air electrode-side catalyst layer is formed by a transfer method, and the porosity of the hydrogen electrode-side catalyst layer is lower than the porosity of the air electrode-side catalyst layer.

9. (Previously Presented) The fuel cell according to claim 2, wherein the volume of pore space of the hydrogen electrode-side catalyst layer is 2% of the total volume of the catalyst layer and a volume of pore space of the air electrode-side catalyst layer is 30% of the total volume of the catalyst layer.